culture if necessary.

When the host is bacteria of *Bacillus genus*, the bacteria are generally cultured at about 30 - 40°C for about 6 - 24 hours, and aeration or stirring may be added to the culture if necessary.

For the medium for culturing the transformant in yeast host, for example, Burkholder minimum medium [Bostian, K.L. et al., Proc. Natl. Acad. Sci. USA, Vol. 77, 4505 (1980)] and SD medium containing 0.5% casamino acid [Bitter, G.A. et al., Proc. Natl. Acd. Sci. USA, Vol. 81, 5330 (1984)] are used. The pH of the medium is preferably adjusted to about 5 - 8. The culture conditions are generally about 20 - 35°C for about 24 - 72 hours, and aeration or stirring may be added to the culture if necessary.

For the medium for culture of the transformants in insect cells and insect hosts, Grace's insect medium [Grace, T.C.C., Nature, 195, 788 (1962)] containing appropriate supplements such as inactivated 10% bovine serum is used. The pH of the medium is preferably adjusted to about 6.2 - 6.4. Usually, the culture conditions are at about 27°C for about 3 - 5 days, and aeration or stirring may be added to the culture if necessary.

For the culture medium of the transformants in animal cell hosts, for example, MEM containing about 5 - 20% fetal calf serum [Science, Vol. 122, 501 (1952)], DMEM [Virology, Vol. 8, 396 (1959)], RPMI 1640 medium [The Journal of the American Medical Association, Vol. 199, 519 (1967)], and 199 medium [Proceeding of the Society for the Biological Medicine, Vol. 73, 1 (1950)] are used. The pH is preferably adjusted to about 6 - 8. Usually, the culture conditions are about 30 - 40°C for about 15 - 60 hours, and aeration or stirring may be added to the culture if necessary.

Specifically, the regulator sequence may be any sequence of the base sequence presented by position from 1 to 2270 of SEQ ID NO: 1 to which the UCP-2 transcriptional regulatory factor can bind, such as sequences containing peroxisome proliferator response element (PPRE) presented by position 284 to 296 of SEQ ID NO: 1, sequences containing CCAAT/enhancer binding protein (C/EBP) binding sequence presented by position 1316 to 1320, 1364 to 1368, or 1698 to 1692 of SEQ ID NO: 1, sequences containing glucocorticoid response element (GRE) presented by position 753 to 758, 1023 to 1030, or 1450 to 1455 of SEQ ID NO: 1, and sequences containing MyoD presented by position 1428 to 1437 of SEQ ID NO: 1.

Therefore, a DNA of this invention contains the promoter region containing the said regulator sequence, and a DNA of this invention may contain a multiple number of the said regulator sequences.

For the base sequences containing a part of the base sequence presented by position 1 to 2270 of SEQ ID NO: 1, any base sequences containing the regulator sequence described above may be used. Specifically, the base sequence presented by position 255 to 430 of SEQ ID NO: 1, the base sequence presented by position 255 to 717 of SEQ ID NO: 1, the base sequence presented by position 717 to 1133 of SEQ ID NO: 1, the base sequence presented by position 1133 to 1389 of SEQ ID NO: 1, and the base sequence presented by position 255 to 1857 of SEQ ID NO: 1 are used.

Furthermore, the base sequence presented by position 571 to 2270 of SEQ ID NO: 1, the base sequence presented by position 717 to 2270 of SEQ ID NO: 1, the base sequence presented by position 1133 to 2270 of SEQ ID NO: 1, the base sequence presented by position 1389 to 2270 of SEQ ID NO: 1, and the base sequence

presented by position 1634 to 2270 of SEQ ID NO: 1 are used.

Since a DNA of this invention contains the UCP-2 promoter region containing the regulator sequence, using the transformant described above, a compound or its salt that promotes or inhibits UCP-2 promoter activity (e.g. a compound that promotes or inhibits heat production) can be screened. The said screening method, screening kit, and the said compound or its salt that promotes or inhibits UCP-2 promoter activity obtained using the said screening method and screening kit are specifically explained below.

(1) A method for screening a compound or its salt that promotes or inhibits UCP-2 promoter activity (e.g. a compound that promotes or inhibits heat production)

A transformant transformed by the DNA of this invention described above is useful for searching and determining a compound or its salt that promotes or inhibits UCP-2 promoter activity of this invention.

A method for determining a compound or its salt that promotes or inhibits UCP-2 promoter activity of this invention is characterized by measuring and comparing polypeptide expression between a transformant of this invention contacted to test compound and the transformant lacking the UCP-2 promoter region of this invention contacted to the test compound.

The said test compound includes peptides, proteins, non-peptide compounds, synthetic compounds, and fermentation products, etc., and these test compounds may be novel compounds or known compounds.

For the polypeptide to be expressed, polypeptides encoded by the structural genes described above (preferably reporter genes) are used.

For the measurement method of polypeptide expression, for example, measurement of luciferase